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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,215	04/10/2001	Branislav N. Meandzija	GIC-556	5948

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EXAMINER	
FISH, JAMIESON W	

ART UNIT	PAPER NUMBER
2617	

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DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/807,215	MEANDZIJA, BRANISLAV N.	
	Examiner	Art Unit	
	Jamieson W. Fish	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11 March 2005 have been fully considered but they are not persuasive.

Regarding arguments to 35 USC § 102(e) rejections to claims **1-3**, **6-7**, **12-14**, and **17-18** under Bopardikar (US 6,052,739). The applicant argues that Bopardikar does not meet the requirements for an anticipation rejection in that the platform independence of Bopardikar does not imply that the application and middleware layer can be configured independently from the operating system layer and the hardware layer (See Pg 7 of Remarks Paragraphs 2-3). The examiner disagrees, the platform independence of Bopardikar does imply configuration of a functionality of the application layer and the middleware layer independently of the operating system layer and the hardware layer. The middleware layer contains configuration information. Configuration information is information about which devices are present, what system software services are installed, what user and group attributes have been selected, and any application-specific information required (See Col. 4 lines 19-30). This configuration information of the middleware shows that various configurations are possible i.e. different devices may be present at different times, different software services maybe installed at various times, different user and group attributes may be selected at different times. Merely changing configuration information of Bopardikar reads on configuring the functionality of the middleware layer. The configuration information of the middleware allows different user/group information to be selected.

Since the user interfaces with the system through the application layer, the selection of different user information would be represented through the application layer thereby reading on "allowing configuration of a functionality of the application layer." The platform dependent layer includes virtual machine system function library handlers which may be written in Java programming language to provide support for system function calls received from the virtual machine (See Col. 4 lines 34-45). System function library handlers support changes when configuration information changes, thus the operating system layer and hardware layer need not change or be modified. Thus Bopardikar's layered software architecture allows configuration of a functionality of the application layer and the middleware layer independently of the operating system layer and the hardware layer.

Regarding arguments to 35 USC § 102(a) rejections to claims **1, 11, 12**, and **22** under Evain. The applicant argues that Evain does not meet the requirements for an anticipation rejection in that Evain's platform independence does not imply that a functionality of the application layer and the middleware layer can be configured independently of the operating system layer and the hardware layer (See Remarks Pg 8 Paragraphs 1-3). The examiner disagrees, like Bopardikar, the platform independence of Evain's application layer and middleware layer does imply that a functionality of the application layer and the middleware layer can be configured independently of the operating system layer and the hardware layer. Evain teaches the middleware layer having configurable functionality (See Pg 6 lines ***Scalability***... Adding a new library to the middleware layer is configurable functionality). Evain teaches the application layer

having configurable functionality (See Pg 3 Paragraph 1, Pg 4 Paragraph 1, Pg 5 Paragraphs 5-6 Applications are scalable, new application objects can be downloaded). In Evain's reference model of the layered system the application layer and middleware layer are developed independently of the MHP infrastructure (See Pg. 2 Paragraph 5). This means the application layer and middleware layer can operate on multiple operating system layers, i.e. Windows NT, Windows 95, Mac, OS9, etc. (See Fig. 1) and hardware layers (See Fig. 3 Software not related to hardware). Since the application layer and the middleware layer have configurable functionality and the application layer and middleware layer operate independently of the operating system layer and hardware layer, it follows that the application layer and the middleware layer have configuration of a functionality independently of the operating system layer and the hardware layer.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims **1-3, 6-7, 12-14, 17-18** are rejected under 35 U.S.C. 102(e) as being anticipated by Bopardikar et al. (U.S. #6,052,739).

2. Regarding claim **1,** Bopardikar teaches a television set-top terminal (See Col. 3 lines 21-22) with software, comprising: a computer readable medium having computer program code means (See Fig. 1 Memory 14 and Col. 3 lines 24-29, 41-42); and means for executing said computer program code means to implement a layered software architecture wherein: an application layer allows a user to interact with the terminal

(See Fig. 2 Application Programs 36 and Col. 3 lines 53-56); a middleware layer supports the application layer by providing Application Program Interfaces (APIs) (See Fig. 2 Java Virtual Machine 40 and Col. 3 lines 56-63 JVM executes APIs); an operating system layer supports the middleware layer (See Fig. 2 OS native layer 61 and Col. 4 lines 35-46); a hardware layer supports the operating system layer (See Fig. 2 Boot Interface 64 and Col. 4 lines 61-67); and said layered software architecture allows configuration of a functionality of the application layer and the middleware layer independently of the operating system layer and the hardware layer (See Fig. 2 Platform Independent 32 and Col. 3 lines 40-52).

3. Regarding claim **2**, Bopardikar teaches wherein: the layered software architecture includes a set top management layer that supports the application layer by configuring management services of the terminal (See Fig. 2 System Database 56 and Col. 4 lines 20-31).

4. Regarding claim **3**, Bopardikar teaches said management services include at least one of application, user, resource and presentation management (See Col. 4 lines 20-30). The USPTO considers Applicant's "at least one of" language to be anticipated by any reference containing one of the subsequent corresponding elements.

5. Regarding claim **6**, Bopardikar teaches an application program interface API for providing configurable functionality (See Col. 4 lines 20-28 System database contains configuration information. A database is an API).

6. Regarding claim **7**, Bopardikar teaches wherein said API enables said terminal to support multiple users (See Col. 4 lines 22-29. "what user and group attributes have been selected").

7. Regarding claims **12-14** and **17-18**, they are method claims corresponding to the apparatus claims 1-3 and 6-7, respectively. Therefore, claims 12-14 and 17-18 are analyzed and rejected according to claims 1-3 and 6-7.

8. Claims **1**, **11, 12,** and **22** are rejected under 35 U.S.C. 102(a) as being anticipated by Evain ("The Multimedia Home Platform" EBU Technical Review –Spring 98).

9. Regarding claims **1** and **11**, Evain teaches a television set-top terminal with software, comprising: a computer readable medium having computer program code means (See pages 1 and 9 Hardware and Software Resources, ROM); and means for executing said computer program code means to implement a layered software architecture wherein: an application layer allows a user to interact with the terminal (See Fig. 1 Mother board CPU); a middleware layer supports the application layer by providing Application Program Interfaces (APIs) (See Fig. 3 Middleware); an operating system layer supports the middleware layer (See Fig. 1 Basic OS layer); a hardware layer supports the operating system layer (See Figs. 2 and 3 Hardware/software resources); and said layered software architecture allows configuration of a functionality of the application layer and the middleware layer independently of the operating system layer and the hardware layer (See Page 5 "Platform-independence is ensured by relying on embedded RTES, virtual machines or other interactive engines") further comprising

at least one of: a set top manager; a presentation manager (See Fig. 1 Presentation manager); an application manager (See Fig. 1 Application manager); a user manager; a resource manager; a set top agent; and a program view assistant. The USPTO considers Applicant's "at least one of" language to be anticipated by any reference containing one of the subsequent corresponding elements.

10. Regarding claims **12** and **22**, they are method claims corresponding to the apparatus claims **1** and **11**, respectively. Therefore, claims 12 and 22 are analyzed and rejected according to claims 1 and 11.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims **4-5** and **15-16** rejected under 35 U.S.C. 103(a) as being unpatentable over Bopardikar in view of Heiske et al. (US #6,714,973)

12. Regarding claim **4**, Bopardikar teaches a set top management layer (See Fig. 2 System Database 56 and Col. 4 lines 20-31). Bopardikar fails to disclose where the set top manager layer implements a state information module to designate the states of resources of the terminal. Implementing a state information module to designate states of resources of a terminal in a communications network is well known in the art as taught by Heiske (See Fig. 1 TS and Col. 3 lines 55-57 and Col. 4 lines 7-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have Bopardikar's set top manager layer implement a state information

module to designate the states of the resources of the terminal as taught by Heiske to quickly and efficiently ascertain the communication links affected by a terminal failure.

13. Regarding claim **5**, Heiske teaches wherein the said state information terminal is based on the ITU-T X.731 standard (See Col. 4 lines 13-17).

14. Regarding claims **15-16**, they are method claims corresponding to the apparatus claims **3-4**. Therefore, claims **15-16** are analyzed and rejected according to claims 3-4.

15. Claims **8-10** and **19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bopardikar in view of Evain ("The Multimedia Home Platform" EBU Technical Review –Spring 98).

16. Regarding claim **8**, Bopardikar teaches an application program interface API for providing configurable functionality (See Col. 4 lines 20-28 System database contains configuration information. A database is an API.) Bopardikar fails to disclose wherein said API enables said terminal to secure controlled access of resources. However, having an API that enables a terminal to secure controlled access of resources is well known in the art as taught by Evain (See Page 8 Security functions and Fig. 3 Security). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Bopardikar's API enable secure controlled access of resources in order to prevent unauthorized users to access resources.

17. Regarding claim **9**, Bopardikar teaches an application program interface API for providing configurable functionality (See Col. 4 lines 20-28 System database contains configuration information. A database is an API.) Bopardikar fails to disclose wherein said API enables said terminal to download, register, start, stop, and monitor

applications of the application layer. Evain teaches an API that enables a terminal to download, register, start, stop, and monitor applications of the application layer (See Figs. 1 and 3 See Page 7-8 Application launch and control and Page 5 Application delivery mechanisms. Applications are securely downloaded in the form of carousel objects. Applications are initiated and terminated. Error signaling and expectations are managed. This is monitoring applications.) Therefore, it would have to one of ordinary skill in the art at the time the invention was made to have Bopardikar's API enable the terminal to download, register, start, stop, and monitor applications of the application layer as taught by Evain so that new applications could be accessed and interacted with by the users of the terminal.

18. Regarding claim **10**, Bopardikar teaches an application program interface API for providing configurable functionality (See Col. 4 lines 20-28 System database contains configuration information. A database is an API.) Bopardikar fails to disclose wherein said API enables said terminal to manage audio video and/or other data presentations. Having an API which enables a terminal to manage audio, video and/or other data presentations is well known in the art as taught by Evain (See Fig. 3 Application launch and control session/event management and Pages 7-8 Application launch and control). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bopardikar's API such that it enabled the terminal to manage audio, video and/or other data presentations as taught by Evain so that audio, video and/or other data presentations could be managed while hiding all aspects of underlying software and hardware.

19. Regarding claims **19-21,** they are method claims corresponding to the apparatus claims **8-10**, respectively. Therefore, claims 19-21 are analyzed and rejected according to claims 8-10.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamieson W. Fish whose telephone number is 571-272-7307. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Ngoc Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF 6/23/2005

NGOC-YEN VU
PRIMARY EXAMINER